


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference Opti95PCT	FOR FURTHER ACTION		See Form PCT/PEA416
International application No. PCT/NO2004/000361	International filing date (<i>day/month/year</i>) 24.11.2004	Priority date (<i>day/month/year</i>) 24.11.2003	
International Patent Classification (IPC) or national classification and IPC INV. G11C806			
Applicant THIN FILM ELECTRONICS ASA et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of 7 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. II Priority</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. VI Certain documents cited</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 22.06.2005		Date of completion of this report 04.05.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Trifonov, A Telephone No. +49 89 2399-7168	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

107 278 968
International application No.
PCT/NO2004/000361

Box No. I Basis of the report

Box No. I Basis of the report

1. With regard to the **language**, this report is based on

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-50 as published

Claims, Numbers

1-36 received on 19.04.2006 with letter of 19.04.2006

Drawings, Sheets

1-26 as published

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/NO2004/000361

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-36
Inventive step (IS)	Yes: Claims	
	No: Claims	1-36
Industrial applicability (IA)	Yes: Claims	1-36
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

10/579 968
AP20 Rec'd PCTPTO 23 MAY 2006
International application No.

PCT/NO2004/000361

Re Item V.

- 1 Reference is made to the following documents:

D1: WO 02 05287 A1
D2: WO 03 046923 A1

- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses a method of driving a data storage apparatus comprising a passive matrix comprising further bit lines, word lines and memory cells of electrically polarizable material exhibiting hysteresis. The method (see Abstract and Fig. 4) comprises a first addressing operation directed to a first memory segment including the following steps executed in accordance with a predetermined pulse protocol:

- setting an addressed data storage cell to a first polarization state by applying a first voltage pulse, as disclosed in D1 - reset step (t1-t2) in Fig. 4;
- applying a second voltage pulse of opposite polarity to that of the first voltage pulse and switching the polarization state of the addressed data storage cell from the first to a second polarization state, as disclosed in D1 - set step (t5-t6) in Fig. 4.

It is further known to the skilled man that the memory devices consist not of a single matrix but are hierarchically structured comprising electrically separated sub matrices and segments. Accordingly, the features of the characterising portion of claim 1:

- applying a second addressing operation to one or more cells in another memory segment, different than the first memory segment where the first addressing operation is executed, and;
 - dependent on the addressing operation to be carried out, storing information in said cell or cells,
- are considered as a logical repetition of the first addressing operation this time in a different memory segment.

Independent claim 1 lacks, therefore, novelty compared with the prior art of D1.

- 3 The rest of the claims, dependent of claim 1, concern features like management of address mapping tables (logical-to-physical address translation tables) and add nothing new or inventive to claim 1.
- 4 The present application as a whole comprises subject-matter which is considered, when appropriately defined, to conform the requirements of the PCT for novelty and inventive step.

It is stated in the description (see pg, 15, ln. 20-21) a method of reduction the consecutive addressing in the same segment by directing data addressed by an operation to another segment. A memory device, as described in the preamble of claim 1, its corresponding memory operation complying to said method and characterized by:

- setting an addressed first data storage cell to a first polarisation state by means of a first active voltage pulse in a first operation;
 - applying a second active voltage pulse of opposite polarity to that of the first active voltage pulse to a second storage cell, different than that subjected to the first active voltage pulse in a second operation;
 - said first and second storage cells are located in **different** memory segments;
 - said first and second operations are **consecutive** operations;
 - redirection of addressed data from the first to the second segment,
- would seems to satisfy the requirements of PCT.

Re Item VII.

- reference signs are not inserted in parentheses in the claims in accordance with Rule 6.2(b) PCT.